

P1 1171997

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May 19, 2004

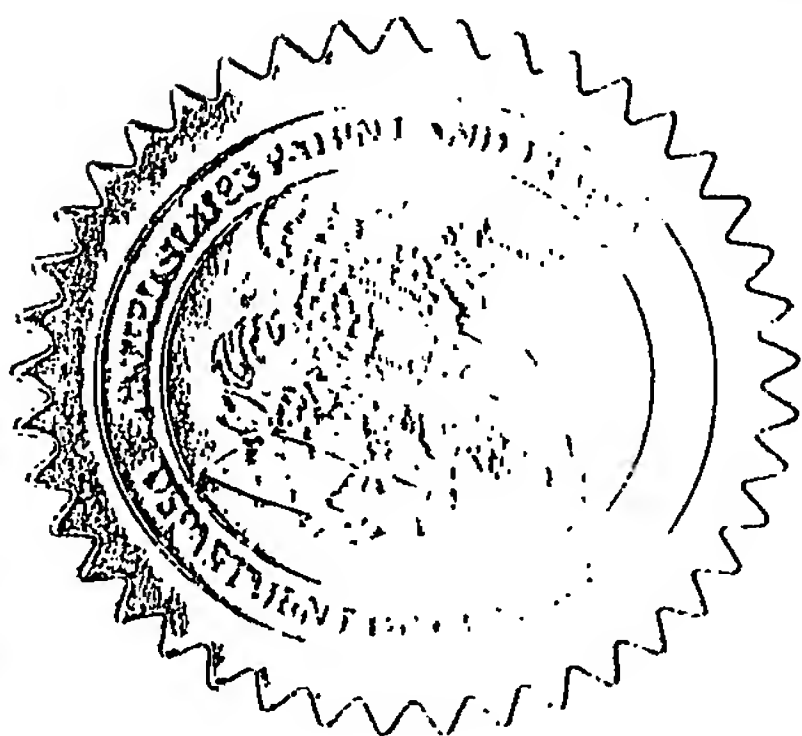
THIS IS TO CERTIFY THAT ANNEXED HERETO IS A TRUE COPY FROM THE RECORDS OF THE UNITED STATES PATENT AND TRADEMARK OFFICE OF THOSE PAPERS OF THE BELOW IDENTIFIED PATENT APPLICATION THAT MET THE REQUIREMENTS TO BE GRANTED A FILING DATE.

APPLICATION NUMBER: 60/495,656

FILING DATE: August 15, 2003

RELATED PCT APPLICATION NUMBER: PCT/US04/06357

By Authority of the
COMMISSIONER OF PATENTS AND TRADEMARKS



H. L. JACKSON
Certifying Officer

**PRIORITY
DOCUMENT**

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COMPLIANCE WITH RULE 17.1(a) OR (b)

PATENT APPLICATION SERIAL NO. _____

U.S. DEPARTMENT OF COMMERCE
PATENT AND TRADEMARK OFFICE
FEE RECORD SHEET

08/19/2003 SDEN3231 00000025 070832 50495656

01. FC:1005 150.00 DA

PTO-1556
(5/87)

Please type a plus sign (+) inside this box → ☐

PTO/SB/16 (02-01)
Approved for use through 10/31/2002. OMB 0651-0032
Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
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PROVISIONAL APPLICATION FOR PATENT COVER SHEET

This is a request for filing a PROVISIONAL APPLICATION FOR PATENT under 37 CFR 1.53 (c).

Express Mail Label N . EL 99507924/US

INVENTOR(S)

Given Name (first and middle (if any))	Family Name or Surname	Residence (City and either State or Foreign Country)
Carl Lynn Howard	Christensen Arbuckle	South Jordan, Utah USA Bountiful, Utah USA

☐ Additional inventors are being named on the next separately numbered sheets attached hereto

TITLE OF THE INVENTION (280 characters max)

SELECTED FUNCTIONALITY IN A BROADCAST ROUTER

CORRESPONDENCE ADDRESS

Direct all correspondence to:

☐ Customer Number

OR

Type Customer Number here

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☒ Firm or
Individual Name

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PATENT OPERATIONS.

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ENCLOSED APPLICATION PARTS (check all that apply)

☒ Specification Number of Pages

2

☐ CD(s), Number

☐ Drawing(s) Number of Sheets

☐ Other (specify)

☐ Application Data Sheet. See 37 CFR 1.76

METHOD OF PAYMENT OF FILING FEES FOR THIS PROVISIONAL APPLICATION FOR PATENT (check one)

☐ Applicant claims small entity status. See 37 CFR 1.27.

☐ A check or money order is enclosed to cover the filing fees

☒ The Commissioner is hereby authorized to charge filing fees or credit any overpayment to Deposit Account Number:

07-0832

FILING FEE
AMOUNT (\$)

160

☐ Payment by credit card. Form PTO-2038 is attached.

The invention was made by an agency of the United States Government or under a contract with an agency of the United States Government.

☒ No.

☐ Yes, the name of the U.S. Government agency and the Government contract number are: _____.

Respectfully submitted,

SIGNATURE

Francis A. Davenport

Date

August 15, 2003

TYPED or PRINTED NAME

FRANCIS A. DAVENPORT.

REGISTRATION NO.
(if appropriate)

36,316

Docket Number:

PU 030244

TELEPHONE 609 734-6805

USE ONLY FOR FILING A PROVISIONAL APPLICATION FOR PATENT

This collection of information is required by 37 CFR 1.51. The information is used by the public to file (and by the PTO to process) a provisional application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 8 hours to complete, including gathering, preparing, and submitting the complete provisional application to the PTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, Washington, D.C., 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Box Provisional Application, Assistant Commissioner for Patents, Washington, D.C. 20231.

17613 U.S. PTO
60/495656
08/15/03

FEE TRANSMITTAL for FY 2003

Patent fees are subject to annual revision.

TOTAL AMOUNT OF PAYMENT (\$) 160

Complete If Known

Application Number	N/A
Filing Date	HEREWITH
First Named Inventor	Carl Christensen, Lynn Howard Arbuckle
Examiner Name	N/A
Group / Art Unit	N/A
Attorney Docket No.	PU 030244

METHOD OF PAYMENT (check one)

1. ☐ The Commissioner is hereby authorized to charge indicated fees and credit any over payments to:

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Number

07-0832

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Account
Name

THOMSON multimedia Licensing Inc.

☒ Charge Any Additional Fee Required
Under 37 CFR 1.16 and 1.17
☐ Applicant claims small entity status.
See 37 CFR 1.27

2. ☐ Payment Enclosed:

☒ Check ☐ Credit card ☐ Money
Order ☐ Other

FEE CALCULATION

1. BASIC FILING FEE

Large Fee Code	Entity Fee (\$)	Small Fee Code	Entity Fee (\$)	Fee Description	Fee Paid
101	740	201	370	Utility filing fee	
106	330	206	165	Design filing fee	
107	510	207	255	Plant filing fee	
108	740	208	370	Reissue filing fee	
114	160	214	80	Provisional filing fee	160

SUBTOTAL (1)

(\$ 160)

2. EXTRA CLAIM FEES

Total Claims	Extra Claims	Fee from below	Fee Paid
Independent Claims	-20 ** = 0	X	0
Multiple Dependent	-3 ** = 0	X	0

Large Fee Code	Entity Fee (\$)	Small Fee Code	Entity Fee (\$)	Fee Description
103	18	203	9	Claims in excess of 20
102	84	202	42	Independent claims in excess of 3
104	280	204	140	Multiple dependent claim, if not paid
109	84	209	42	** Reissue independent claims over original patent
110	18	210	9	** Reissue claims in excess of 20 and over original patent

SUBTOTAL (2)

(\$ 0)

**or number previously paid, if greater; For Reissues, see above

FEE CALCULATION (continued)

3. ADDITIONAL FEES

Large Fee Code	Entity Fee (\$)	Small Fee Code	Entity Fee (\$)	Fee Description	Fee Paid
105	130	205	65	Surcharge - late filing fee or oath	
127	50	227	25	Surcharge - late provisional filing fee or cover sheet.	
139	130	139	130	Non-English specification	
147	2,520	147	2,520	For filing a request for reexamination	
112	920*	112	920*	Requesting publication of SIR prior to Examiner action	
113	1,840*	113	1,840*	Requesting publication of SIR after Examiner action	
115	110	215	55	Extension for reply within first month	
116	400	216	200	Extension for reply within second month	
117	920	217	460	Extension for reply within third month	
118	1,440	218	720	Extension for reply within fourth month	
128	1,960	228	980	Extension for reply within fifth month	
119	320	219	160	Notice of Appeal	
120	320	220	160	Filing a brief in support of an appeal	
121	280	221	140	Request for oral hearing	
138	1,510	138	1,510	Petition to institute a public use proceeding	
140	110	240	55	Petition to revive - unavoidable	
141	1,280	241	640	Petition to revive - unintentional	
142	1,280	242	640	Utility issue fee (or reissue)	
143	460	243	230	Design issue fee	
144	620	244	310	Plant issue fee	
122	130	122	130	Petitions to the Commissioner	
123	50	123	50	Processing fee under 37 CFR 1.17 (q)	
126	180	126	180	Submission of Information Disclosure Stmt	
581	40	581	40	Recording each patent assignment per property (times number of properties)	
146	740	246	370	Filing a submission after final rejection (37 CFR § 1.129(a))	
149	740	249	370	For each additional invention to be examined (37 CFR § 1.129(b))	
179	740	279	370	Request for Continued Examination (RCE)	
169	900	169	900	Request for expedited examination of a design application	

Other fee (specify) _____

*Reduced by Basic Filing Fee Paid

SUBTOTAL (3)

(\$ 0)

SUBMITTED BY

Complete (if applicable)

Name (Print/Type)	Francis A. Davenport	Registration No. Attorney/Agent)	38,316	Telephone	609-734-6805
Signature	Francis A. Davenport			Date	09/15/03

WARNING: Information on this form may become public. Credit card information should not be included on this form. Provide credit card information and authorization on PTO-2039.

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SELECTED FUNCTIONALITY IN A BROADCAST ROUTER

Generally, a more expensive router is expected to have greater functionality than a less expensive router. Oftentimes, this results in different router models have different hardware configurations, thereby adding to both manufacturing and maintenance costs. The invention allows different router models to have common hardware arrangements but to provide the user with differing configuration or levels of operational sophistication provided by information easily changeable by means of remote control of PROM content, or module and or circuit board replacement.

The circuit used for configuring multiple FPGA's in the Bach Router is used to provide a selected level of functionality to the Router. On power-up, or when a board is inserted, a request for configuration is generated. The circuit recognizes the request and completes the configuration using the configuration information maintained in a configuration repository. The level of functionality of the broadcast router is controlled by the circuit. For example, to upgrade a router from a first level of functionality in which the router is capable of performing a first set of functions to a second level of functionality in which the router is capable of performing a second set of functions, the circuit used to configure the router is removed and replaced by a second circuit having different configuration information maintained in it's configuration repository. When the router issues a subsequent request for configuration, the information contained in the second circuit will be used to configure the router. In this manner, the broadcast router is configured at the second level of functionality which differs from the first level of functionality. Thus the advantageous combination of an FPGA with various levels of processing functionality or sophistication, together with a memory containing corresponding functionality configurations, allows the manufacturer to assemble standardized products with functionality determined by the memory .

Others have used on-board storage to configure a device, they have not supported on-demand functionality when using on-board storage. The programmable devices residing within a broadcast router component are initially configured using a shared configuration information repository. For example, the configuration of all of the output boards of a broadcast router is performed using the configuration information stored in a shared configuration information repository residing on a first removable configuration control board inserted into the broadcast router. The programmable devices issue requests for configuration which result in

the transfer of configuration information from the shared configuration information repository to the requesting programmable device. Upon configuration thereof, the programmable devices have a first level of functionality. In other words, the configuration information is used to program the devices to perform a first set of functions. The first configuration control board is removed and replaced with a second configuration control board. Like the first configuration control board, the second configuration control board has a shared configuration information repository in which configuration information for the programmable devices is maintained. The information maintained in the shared configuration information repository of the second configuration control board differs from that maintained in the shared configuration information repository of the first configuration control board. When the programmable devices are subsequently configured, for example, during a subsequent power-up of the broadcast router, the configuration information maintained in the shared configuration repository of the second configuration control board provides the programmable devices of the broadcast router with a second level of functionality, typically, a level of functionality greater than the broadcast router's initial level of functionality. In this manner, the devices of the broadcast router have been programmed to perform a second set of functions distinct from the first set of functions.